



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/608,125	06/30/2003	Tetsushiro Tsuchiya	030493	3025
23850	7590	08/24/2004	EXAMINER	
ARMSTRONG, KRATZ, QUINTOS, HANSON & BROOKS, LLP 1725 K STREET, NW SUITE 1000 WASHINGTON, DC 20006			HAN, JASON	
			ART UNIT	PAPER NUMBER
			2875	

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/608,125	TSUCHIYA, TETSUSHIRO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Jason M Han	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☒ Claim(s) 1-20 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input checked="" type="checkbox"/> Other: <u>Japanese References</u> .  |

## **DETAILED ACTION**

### ***Drawings***

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the pendant (Claims 2, 8, and 15), broach (Claim 6), portable telephone (Claim 16), and portable personal computer (Claim 20) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: Lighting Device with Negative Ion Generation.

3. A substitute specification in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) is required. The substitute specification filed must be accompanied by a statement that it contains no new matter.

4. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are:

- a. The inventor refers to minus ion generation, but ions are charged particles that are either positively or negatively charged particles;
- b. In the third paragraph of Page 1, the inventor mentions tourmaline as a hopeful mineral (underline added by examiner). Please elucidate and write positively and specifically about what is being stated;
- c. The inventor mentions tourmaline and an activated charcoal as a means for generating negative (minus) ions, and further mentions that said means is weak compared to a Leonard's effect. To quote the inventor, "minus ions generated from such a material is so weak compared with a Leonard's effect, and there has been an objective to

increase an amount of the generating of minus ions (Page 2).” Yet, in the Summary of the Invention (Page 3) there is little given in addressing this problem and no resolution has been specifically stated. The inventor’s solution and objective of the present invention is to an apparatus that incorporates a material mixture comprising of tourmaline, activated charcoal, and a mineral of rare earth metal, which as mentioned above, are weak in generating minus ions;

d. The paragraph on Pages 6-7 is confusing. First, it is inherent that a material that stands in a light’s path, with the exception of a lens, light modifier, or anything not opaque, etc., would block the electromagnetic waves of said light. Second, the following statements fail to enable and claim a novel invention: “While the mechanism of the shielding of electromagnetic waves has not been clarified yet, the minus ion material such as tourmaline has a crystal structure having electric charges, which may absorb electromagnetic waves. The mechanism of the shielding of electromagnetic waves does not limit the scope of the present invention (Isn’t this the objective of the present invention and the reason for the negative ion material?). Even if the mechanism the inventor of the present invention considers will be turned out to be wrong, the present invention should not be construed to be limited into the mechanism described here (underlines added by examiner)”;

e. On Page 7, the inventor claims that the light source is capable of raising the temperature of the negative (minus) ion material from 30 to

50°C. Given the present embodiment, especially one of smaller size such as a watch, this does not seem feasible. The range is fairly broad wherein the power consumption at 50W is too high for a power source (battery) of this configuration, while at a lower consumption it is unlikely that an electric bulb would generate that much heat. This engineering design is unreasonable and requires clarification.

5. The disclosure is objected to because of the following informalities: numerous grammatical errors are found throughout. The examiner has forgone any correction due to the amount, and the specification has not been checked to the extent necessary to determine the presence of all possible minor errors.

Appropriate correction is required.

### ***Claim Objections***

6. Claims 1-20 are objected to because of the following informalities: please change "light" into "lighting device". Appropriate correction is required.
7. Claims 1 and 8 are objected to because of the following informalities: the reference to a mineral of rare earth metal is indefinite and broad. Please distinguish and identify the limitation.
8. Claim 8 is further objected to because of the following informalities: the reference to an attaching part is indefinite. It is under the assumption of the examiner that the inventor is claiming a part on the lighting device body, which is a means for attaching to a user. Claim 14 provides a more definite and similar limitation. Appropriate correction is required.

***Claim Rejections - 35 USC § 101***

9. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

10. Claims 1-7 and 14-20 are rejected under 35 U.S.C. 101 because the claimed invention lacks patentable utility. The applicant provides no credible evidence to specifically and substantially support the utility of the claimed invention. It is not clear how the negative ion material is being raised to 25 to 50°C. More specifically, it is also unclear how the said material is activated by heat to provide shielding of electromagnetic waves. Please further note Paragraph 4(c) in the examiner's objection to the specification above.

11. In addition, Claim 14 refers to a negative (minus) ion ceramics, but fails to particularly point out the utility of said ceramics. To quote the inventor, "The minus ion material may comprise a minus ion ceramics, including tourmaline and activated charcoal. Also, a mineral of rare earth element including monazite, a mineral of silicate, and feldspar may be used. In addition, any material generating minus ions may be used in this present invention. These substances may be used alone or in combination. Among them, tourmaline, and in particular, a minus ion ceramics including tourmaline and a ceramics, is preferably used. It is also preferable to use a ceramics generating a far infrared ray. In general, a minus ion ceramics, which is commercially available, may be preferably used. The minus ion ceramics is a mixture of tourmaline and a ceramics. The minus ion material may be mixed with a mineral of rare earth

Art Unit: 2875

metal including monazite, a mineral of silicate and so on, if necessary [Pages 4-5].” The inventor provides no utility for the said ceramics.

***Claim Rejections - 35 USC § 112***

12. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

13. Claims 1-7 and 14-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

14. With regard to Claims 1-7, the specification provides no clear basis for how the negative (minus) ion material is raised to a temperature of 25 to 50°C. It is unreasonable and unclear as to how the light source and external body contact may provide sufficient warmth to raise the temperature of said material to such an upper extreme. The inventor also fails to clearly demonstrate how the negative ion materials, especially those mentioned as a limitation, are activated and function at said temperatures.

15. With regard to Claims 14-20, the inventor mentions that the negative (minus) ion material shields electromagnetic waves. While it may be true to employ the principles of physics to cancel and neutralize positive ions, the inventor does not provide sufficient grounds for the negative ion material shielding electromagnetic waves. It is not clear how the material is activated by



Art Unit: 2875

heat to provide a function whereby said waves are blocked. To quote the inventor, "While the mechanism of the shielding of electromagnetic waves has not been clarified yet, the minus ion material such as tourmaline has a crystal structure having electric charges, which may absorb electromagnetic waves. The mechanism of the shielding of electromagnetic waves does not limit the scope of the present invention (Isn't this the objective of the present invention and the reason for the negative ion material?). Even if the mechanism the inventor of the present invention considers will be turned out to be wrong, the present invention should not be construed to be limited into the mechanism described here [Page 7, underlines added by examiner]".

16. Claim 14 is further rejected regarding enablement of said ceramics. "The minus ion material may comprise a minus ion ceramics, including tourmaline and activated charcoal. Also, a mineral of rare earth element including monazite, a mineral of silicate, and feldspar may be used. In addition, any material generating minus ions may be used in this present invention. These substances may be used alone or in combination. Among them, tourmaline, and in particular, a minus ion ceramics including tourmaline and a ceramics, is preferably used. It is also preferable to use a ceramics generating a far infrared ray. In general, a minus ion ceramics, which is commercially available, may be preferably used. The minus ion ceramics is a mixture of tourmaline and a ceramics. The minus ion material may be mixed with a mineral of rare earth metal including monazite, a mineral of silicate and so on, if necessary [Pages 4-5, underlines added by examiner]." It is unclear what is being claimed and the

Art Unit: 2875

inventor needs to clearly provide support and reasoning behind using the ceramic material.

17. In addition, with regard to Claims 6, 7, 13, 16, 19, and 20, the inventor mentions said lighting device may be designed into a broach, portable telephone, personal computer, and designed to incorporate a pulse, blood pressure, and/or body temperature measuring means. However, there is little to no evidence given in the specification to enable the present invention to function as such. The inventor is merely stating and provides no engineering or structural design support for the claims.

***Claim Rejections - 35 USC § 103***

18. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

19. Claims 1, 8, 9, and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi et al. (Pub. No. US 2002/0131266 A1) in view of Kanase (U.S. Patent No. 6001282).

With regards to Claim 1, Naghi discloses a lighting device comprising a front surface [Figure 3, (124a)], a back surface that is in contact with a user [Figure 3, (208)], and wherein a side surface extends between said surfaces [Figure 3, (112a)]. Naghi further discloses a light source provided on the center

Art Unit: 2875

of said front surface [Figure 3, (120a)], and a reflector formed on the front surface to surround said light source [Claims 23 and 24].

Naghi does not disclose a negative (minus) ion material on said back surface.

Kanase discloses an electromagnetic shield [Figure 1, (20)] comprising of tourmaline and a porous carrier.

It would have been obvious to modify the lighting device of Naghi with the electromagnetic shield (acting as said back surface) of Kanase whereby the tourmaline produces negative ions to cancel positive ions created by the radiating (lighting) device. Thereby, it is believed to reduce unwanted health effects caused by said positive ions interacting with human body cells [see Kanase: Column 1, Lines 23-40].

20. With regards to Claim 8, Naghi discloses a means for attaching said light device body to a user [Figure 3, (104a)].

21. With regards to Claim 9, Naghi discloses a reflector formed on the front surface to surround said light source [Claims 23 and 24].

22. With regards to Claim 14, Kanase discloses an electromagnetic shield composed of a negative ion ceramic material comprising tourmaline and a porous carrier, wherein said carrier comprises of a polymer such as high density polyethylene [Column 1, Lines 55-67].

23. Claims 2, 6, 10, and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claims 1,8, and 14

Art Unit: 2875

above, and further in view of Tanzawa Hiroshi (Japanese Publication No. 2001-314213).

With regards to Claim 2, Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device designed into a pendant.

Tanzawa Hiroshi discloses a material for tourmaline accessories such as a pendant [see Abstract].

It would have been obvious to modify Naghi in view of Kanase to design said lighting device into a pendant as disclosed in Tanzawa Hiroshi to provide said health benefits of tourmaline around a user's neck, as well as for its ornamental design.

24. With regard to Claims 6, 10, and 15, Tanzawa Hiroshi discloses material for tourmaline accessories, which is inherently inclusive of a ring, bracelet, pendant, broach, necklace, etc. [see Abstract].

25. Claims 3, 4, 11, 12, 17, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claims 1, 8, and 14 above, and further in view of Aoyama et al. (U.S. Patent No. 5548565).

Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device comprising a timekeeping function/watch.

Art Unit: 2875

Aoyama discloses a timepiece device/wrist watch capable of illuminating an outside object [Figure 1; Column 3, Line 60].

It would have been obvious to modify Naghi in view of Kanase into the timepiece device (watch) of Aoyama in order to provide a user with a hands-free, portable light and clock combination, which is commonplace in today's market.

26. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claim 1 above, and further in view of Branch et al (U.S. Patent No. 5309145).

Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device comprising a display on the side surface of the body.

Branch discloses a device with a light source on top [Figure1, (14)] and a display located on the side surface of the body [Figure 1, (14)].

It would have been obvious to modify Naghi in view of Kanase to incorporate the side display of Branch to provide a clock or time keeping function for a user. It would also have been obvious to one skilled in the art that such a configuration is merely a design choice or preference as to where the display is located on the body of said lighting device.

27. Claims 7, 13, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claims 1, 8, and 14 above, and further in view of Baba et al. (Pub. No. US 2003/0176815 A1) and Suzuki et al. (Pub. No. US 2003/0181795 A1).

Art Unit: 2875

Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device comprising a means of measuring a pulse, blood pressure, and/or body temperature.

Baba discloses a physical activity apparatus [Figure 1A], and Suzuki discloses a wearable life support apparatus [Figure 1], whereby both provide a means for measuring a user's physiological condition.

It would have been obvious to modify Naghi in view of Kanase to incorporate a physical activity or life support apparatus as taught by Baba and Suzuki, respectively, in order to allow a user to monitor one's activity (i.e. sports) and/or provide health control (i.e. at risk patients).

28. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claim 14 above, and further in view of Kaschke (U.S. Patent No. 6044153).

Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device designed into a portable telephone.

Kaschke discloses a hand adaptive telephone [Figure 1].

It would have been obvious to modify Naghi in view of Kanase to include the portable telephone of Kaschke to provide a user with a hands-free way for calling someone.

Art Unit: 2875

29. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Naghi in view of Kanase as applied to Claim 14 above, and further in view of Janik (U.S. Patent No. 5581492).

Naghi in view of Kanase disclose a lighting device as described in Paragraph 19 above.

Naghi in view of Kanase does not disclose said lighting device designed into a portable personal computer.

Janik discloses a flexible wearable computer [Figure 7].

It would have been obvious to modify Naghi in view of Kanase into a portable personal computer as disclosed by Janik in order to provide a flexible wearable computer that allows comfortable hands-free portability.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to further show the state of the art with respect to the current application:

U.S. Patent No. 5193896 to Oberlander;

U.S. Patent No. 5568971 to Jewell;

U.S. Patent No. 4788632 to Friedman;

U.S. Patent No. 6491467 to Mitsuya;

U.S. Patent No. 3321617 to Santana (bracelet light);

U.S. Patent No. 3805047 to Dockstader (pendant light);

U.S. Patent No. 4719544 to Smith (broach light);

Art Unit: 2875

U.S. Patent No. 4262324 to Murphy (necklace light);

Japanese Publication No. 2003-273570 to Nishizaki Teruichi et al.;

Japanese Publication No. 04-317662 to Kumamoto Michio;

Japanese Publication No. 11-057026 to Tsukuda Hisakazu et al.;

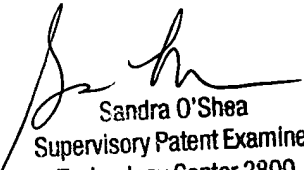
Japanese Publication No. 11-244400 to Imamura Hiroshi.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH

  
Sandra O'Shea  
Supervisory Patent Examiner  
Technology Center 2800